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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,450	06/07/2001	Margo N. Whale	10007199-1	9173

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HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P. O. Box 272400  
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EXAMINER
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BEKERMANN, MICHAEL

ART UNIT	PAPER NUMBER
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3622

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/876,450

Applicant(s)

WHALE, MARGO N.

Examiner

Michael Bekerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 101*

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-24 are rejected under 35 U.S.C. 101 because the claims are not "within the technological arts." Applicant must include a non-trivial computer limitation (e.g. a calculation) in the body of the claims. The inclusion of a computer to input, transmit or output data is taken as a trivial recitation of technology which is not enough to put the claims within the technological arts. The examiner suggests specifying a computer as performing the steps in the body of claim 1 and specifying computer components in the body of claim 13. See below for the basis for this rejection.

As an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "[p]romote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the

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claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. In re Toma at 857.

In Toma, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the "technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.*, the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, *State Street* abolished the Freeman-Walter-Abele test used in *Toma*. However, *State Street* never addressed the second part of the analysis, i.e., the "technological arts" test established in *Toma* because the invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a §101 rejection finding the claimed invention to be non-statutory. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 11, 13-16, 23, 25-28, and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Shimbori (US Pub. No. 2004/0204986). Shimbori shows a printing cost system that monitors printer consumable usage and includes all of the limitations recited in the above claims.

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4. Referring to claims 1, 13, and 25, Shimbori teaches a system and method for establishing data sessions to receive orders of print device consumable products for one or more print systems (Paragraph 0062, Sentence 4); during the data sessions, obtaining usage parameters relating to print device components associated with the different print systems (Paragraph 0062, Sentence 2); calculating consumable product usage by the print systems over time as a function of the usage parameters obtained during a plurality of the data sessions (Paragraph 0078, Sentence 4); and initiating promotional actions (met by placing an order) directed to operators of particular print systems in response to changes in consumable product usage (if more is used, more is ordered) by said particular print systems (Paragraph 0080, Sentences 3 and 6).

5. Referring to claim 13, examiner considers the placing of an order to constitute the exchanging of usage data across a server.

6. Referring to claim 25, a predetermined amount can be 1 unit. Thus, promotional action is initiated for any change in consumable product usage.

7. Referring to claims 2-4, 14-16, and 25-28, Shimbori shows the usage parameters as comprising levels of print device consumable products, current levels of print system toner, and number of pages used by the printer (Paragraph 0062, Sentence 2).

8. Referring to claims 11, 23, and 34, Shimbori teaches a method of obtaining usage parameters from memory associated with the printer consumable products (Paragraph 0044). Examiner considers the consumable ordering apparatus of Shimbori to be associated with the consumable products in which it checks.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 5, 6, 17, 18, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimbori (US Pub. No. 2004/0204986) in view of Christensen (US Patent 5,710,886).

Shimbori doesn't teach taking a promotional action only if usage changes by a predetermined amount. Christensen teaches a promotional system in which changes in product usage trigger promotional action such as the offering of coupons (See Column 11, Lines 4-12 of Christensen). People changing their usage of baby products will lead to more or less baby product coupons. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide promotional coupons for consumables when significant changes in consumable usage are detected. This would allow users of Shimbori's system to get discounts for increasing usage of consumables. Examiner considers providing coupons as a form of promotional action. Official notice is taken that changes in a value can be expressed with elementary arithmetic as both an amount of difference as well as a percentage change. It would have been obvious to one having ordinary skill in the art at the time the invention was made to initiate promotional actions when significant usage changes are detected as a

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percentage, since, for documentation purposes, some people have an easier time understanding percentages as opposed to amounts.

11. Claims 7, 8, 10, 19, 20, 22, 30, 31, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimbori (US Pub. No. 2004/0204986) in view of Sekizawa (US Patent 6,430,711).

Shimbori doesn't teach promotional actions comprising the composition of graphical usage charts and the sending of those charts to the print system operator. Sekizawa teaches a computer monitoring network that displays graphical usage charts for print systems indicating toner usage over a sequential time period. Examiner considers both toner and paper as referring to printer consumables. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide graphical usage charts of consumables over time and send them to print system operators. This would allow users of Shimbori's system to keep track of utilization for purposes of further promotional action.

12. Claims 9, 21, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimbori (US Pub. No. 2004/0204986) in view of Hayward (US Patent 6,798,997).

Shimbori's system teaches promotional actions that involve placing alternative purchase contracts. Shimbori doesn't teach the proposal of said alternative purchase contracts. Hayward teaches a supply ordering apparatus that displays a status window with a "Buy Now" button when printer ink is low (Figure 4). Examiner considers the displaying of the status window and the presence of the "Buy Now" button to constitute contacting the operators and proposing an alternative purchase contract. Examiner

considers the ordering of inks different than those of a previous order to be an alternative purchase contract. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include an alternative contract proposal into the Shimbori system. This would allow users of Shimbori's system to have more control over the ordering of printer supplies.

13. Claims 12, 24, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimbori (US Pub. No. 2004/0204986) in view of Arcaro (US Patent 6,128,448).

Shimbori doesn't teach a system of obtaining usage parameters from memory that is incorporated with the consumable product. Shimbori's system teaches obtaining said usage parameters from a memory that is associated, not necessarily incorporated, with the consumable product. Arcaro teaches a method and apparatus for monitoring toner that includes memory directly attached to the toner cartridge (Abstract). Examiner considers memory attached to a toner cartridge as being incorporated with a consumable product. It would have been obvious to one having ordinary skill in the art at the time the invention was made to attach a memory medium to the toner cartridges for Shimbori's system. This would allow for more accurate toner level readings to be obtained.

### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.



The following references are cited to further show the state of the art with respect to promotional actions involving the monitoring of imaging device consumables:

U.S. Patent No. 5,682,140 to Christensen

U.S. Patent No. 5,594,529 to Yamashita

U.S. Pub. No. 2002/0171866 to Parry

U.S. Pub. No. 2002/0194064 to Parry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Bekerman whose telephone number is (571) 272-3256. The examiner can normally be reached on Monday - Friday, 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric W. Stamber can be reached on (571) 272-6724. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MB

Jeffrey Carlson  
Primary Examiner  
